

BEFORE THE  
ILLINOIS COMMERCE COMMISSION

Kevin Grens	:	
v.	:	
Illinois-American Water Company	:	
	:	
People of the State of Illinois	:	Docket No. 05-0681
v.	:	Docket No. 06-0094
Illinois-American Water Company	:	Docket No. 06-0095
	:	(Cons.)
	:	
Village of Homer Glen	:	
v.	:	
Illinois-American Water Company	:	

Direct Testimony of  
**Scott J. Rubin**

on Behalf of

People of the State of Illinois  
and  
Village of Homer Glen

June 30, 2006

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## 1. Introduction

**Q. Please state your name and business address.**

A. My name is Scott J. Rubin. My business address is 3 Lost Creek Drive, Selinsgrove, PA.

**Q. By whom are you employed and in what capacity?**

A. I am an independent consultant and an attorney. My practice is limited to matters affecting the public utility industry.

**Q. What is the purpose of your testimony in this case?**

A. I have been asked by the Office of Attorney General (AG) and the Village of Homer Glen (HG) to assist in their investigation of the metering, billing, and customer service practices of Illinois-American Water Company (IAWC or Company), as well as other matters raised in their complaints.

**Q. What are your qualifications to provide this testimony in this case?**

A. I have testified as an expert witness before utility commissions or courts in the District of Columbia and in the states of Arizona, Delaware, Kentucky, Illinois, Maine, Maryland, New Jersey, New York, Ohio, Pennsylvania, and West Virginia. I also have testified as an expert witness before two committees of the U.S. House of Representatives and one committee of the Pennsylvania House of Representatives. I also have served as a consultant to the staffs of two state utility commissions, several national utility trade associations, and state and local governments throughout the country. Prior to establishing my own consulting and law practice, I was employed by the Pennsylvania Office of Consumer Advocate from 1983 through January 1994 in increasingly responsible positions. From 1990 until I left that Office, I was one of two senior attorneys

in that Office. Among my other responsibilities in that position, I had a major role in setting the ir policy positions on water and electric matters. In addition, I was responsible for supervising the technical staff of that Office. I also testified as an expert witness for that Office on rate design and cost of service issues.

In addition, from 1990 until 1994, I chaired the Water Committee of the National Association of State Utility Consumer Advocates (NASUCA). In that position, I served as the liaison between NASUCA members and various industry and government associations, including the National Association of Water Companies, the American Water Works Association, and the U.S. Environmental Protection Agency. I was frequently called upon by those organizations to provide the consumer perspective on various water-industry issues, including customer service.

Throughout my career, I developed substantial expertise in matters relating to the economic regulation of public utilities. I have published articles, contributed to books, written speeches, and delivered numerous presentations, on both the national and state level, relating to regulatory issues. I have attended numerous continuing education courses involving the utility industry. I also periodically participate as a faculty member in utility-related educational programs for the Institute for Public Utilities at Michigan State University, the American Water Works Association (AWWA), and the Pennsylvania Bar Institute. Appendix A to this testimony is my curriculum vitae.

**Q. Do you have any experience that is particularly relevant to the issues in this case?**

A. Yes, I do. I have studied water utilities' billing and customer service practices for many years. During 2002, I was a member of the team that advised the Washington (D.C.)

Water and Sewer Agency on their billing, collection, and disconnection practices. That work included conducting a survey of several very large water utilities throughout the United States to better understand their practices in these areas. In 1999 and 2000, I helped develop the AWWA's training program and toolkit for small water systems, which includes a component on customer service and payment practices. That work resulted in the publication of an article that I co-authored entitled "Ten Practices of Highly Effective Water Utilities" in April 2001. From 2003 through 2005, I was retained by the AWWA to lead a team to conduct research and provide advice on utility customer payment practices, with a particular focus on low-income customers. Part of that work included a survey of more than 300 water utilities that provided important information about their billing and payment practices. That work resulted in AWWA's publication in 2005 of a manual for utility managers: *Thinking Outside the Bill: A Utility Manager's Guide to Assisting Low-Income Water Customers*. In addition, I have lectured on customer service issues in the water industry, including billing and metering, at the NARUC Annual Regulatory Studies Program at Michigan State University.

## 2. Overview

**Q. Please provide an overview of the issues that you will be addressing.**

A. The AG and HG filed complaints against IAWC. The complaints were the result of numerous inquiries that the AG and HG received from IAWC customers about very high bills for water service during 2005, as well as other issues. Upon further investigation, it appears that there are at least three distinct reasons for many of the very high bills: (1) IAWC billing for previously unbilled water consumption that was discovered when a malfunctioning meter-reading device was replaced; (2) IAWC issuing bills with high

estimated consumption when a meter reading was not obtained; and (3) other billing, metering, or meter reading problems.

The AG and HG complaints, and my investigation, also address how IAWC responds to high-bill complaints that it receives from customers. Billing and metering errors happen, and customers understand that, but customers expect such problems to be fully and carefully investigated by the utility.

An issue that may be related to billing and metering problems, which is also raised in both complaints, concerns the level of unaccounted for water that is experienced in IAWC's suburban Chicago service area, including Homer Glen. A related issue also is being raised statewide in IAWC's current purchased water case (Docket No. 06-0196), where IAWC is proposing to recover purchased water costs related to unaccounted for water in some service areas, while other areas actually show the Company selling more water than it buys.

**Q. In the course of your investigation, have you identified specific problems and concerns with IAWC's billing, metering, meter reading, and customer service practices?**

A. Yes, I have. As I will explain in more detail later, I identified several problems with the Company's operations, several of which appear to be in direct violation of the Commission's regulations and of reasonable practices within the water utility industry. Briefly, these are:

- There are numerous problems with the quality and accuracy of billing and metering data provided by IAWC.

- IAWC improperly issued make up bills to hundreds of customers in the Chicago Metro area, did not provide truthful and accurate information to customers about the cause of the make up bills, and failed to refund the make up charges with interest as apparently required by the Commission's regulations.
- IAWC's procedures for estimating bills, and for investigating the cause of estimated bills, are inadequate and appear to be in violation of the Commission's regulations.
- IAWC does not adequately track and investigate the cause of bills that are issued with zero consumption. Its procedures in this area also appear to be in violation of the Commission's regulations.
- IAWC has issued thousands of bills with "negative" consumption; that is, bills where an actual meter reading is lower than the estimate used in a previous period. IAWC's bills do not provide accurate information to the customer about negative-consumption bills and appear to violate the Commission's billing regulations.
- IAWC's bills do not disclose the per-unit charge for purchased water, which appears to violate the Commission's billing regulations.

**Q. Are these problems limited to Homer Glen or the Chicago Metro area?**

A. No, they do not appear to be limited to the Chicago Metro area. From the information that the Company has provided, it is my opinion that these problems are pervasive and are likely to exist in all of the Company's Illinois service areas.

**Q. The People's complaint also discusses concerns with the Company's fire hydrants. Have you conducted a full investigation of that issue?**

A. No, I have not investigated IAWC's fire hydrant maintenance and testing practices in any depth; however, I have seen correspondence concerning very serious concerns with the Company's fire hydrants from several communities. That correspondence indicates very serious concerns with the operation, maintenance, and testing of IAWC's fire hydrants and related facilities. These concerns are serious enough that I am recommending that

the Commission oversee or conduct a full investigation of IAWC's hydrant testing and maintenance programs throughout Illinois.

### 3. Summary

**Q. Please summarize your findings and conclusions.**

**A.** I summarize my findings and conclusions as follows:

- The Company has very serious data quality issues with its customer service, billing, and metering records. The Company was not able to respond to reasonable requests for information – the type of information that should be readily available from a competent billing and customer service system. Further, when information was provided, it was often riddled with inaccuracies and inconsistencies that made the data not only unusable, but also cast doubt on the veracity of all information provided. I conclude, therefore, that the Commission should order the Company (at shareholders' expense) to retain an outside firm to conduct a full-scale audit of the Company's billing, metering, and customer service records. I also recommend that the Commission share its findings with its counterparts in other jurisdictions where subsidiaries of American Water Works operate.
- The Company improperly issued make up bills to hundreds of customers in the Chicago Metro area. The bills were not identified as relating to prior-period usage, did not inform the customers of their right to a payment plan, and were not limited to the required 12- or 24- month back billing period. Further, of the few payment plans that were issued, at least two of them failed to comply with the Commission's requirements. Moreover, when the Company decided to refund the charges to customers, the refunds were not made with interest, which also appears to violate the Commission's regulations. It also is not clear how the Company decided who was entitled to a refund and in what amount.
- IAWC has been issuing improper estimated bills to hundreds, if not thousands, of customers in Illinois. The Company has issued three or more consecutive estimated bills to hundreds of Chicago Metro area customers. There have been instances where the Company failed to read meters – even radio-read meters – because of a shortage of personnel. It also does not appear that the Company is properly tracking and attempting to correct consecutive estimated meter reads, so that the circumstance leading to the estimate remains uncorrected for many months.



- IAWC is not taking reasonable and prudent actions to track and investigate customers who receive bills that show zero consumption. Such bills can be a sign of malfunctioning equipment or meter reading employees who are not performing their job properly. Investigating such bills early can help to avoid the kinds of problems that the Company experienced in Chicago Metro, or at least mitigate their impact.
- IAWC's bills are confusing and do not appear to comply with the Commission's billing regulations in several respects. First, IAWC should modify the way in which it shows "negative" consumption (or previous over-estimates) on its bills. Second, IAWC should be crediting customers with interest when it over-estimates consumption. Third, the Company should show the calculation of purchased water (or supply) charges on its bills.
- The Commission should oversee or conduct a full investigation of IAWC's fire hydrant maintenance and testing programs, and order the Company to take appropriate action to remedy any deficiencies that are identified.

#### 4. Data Quality and Availability

**Q. Have you been able to conduct a full investigation of IAWC's billing, metering, and meter reading practices?**

**A.** No, I have not. I repeatedly found problems with the quality of data that IAWC provided in response to discovery. Information the Company provided made no sense (for example, meter reading dates in the future), was incomplete, did not match previously provided information, or otherwise appears to be unreliable. It appears that the Company was either unwilling or unable to provide data output, in electronic form, directly from its computer system. Instead, it appears that information was printed out and scanned, or typed by hand into a spreadsheet. This makes it extremely difficult and time-consuming to analyze the data, let alone determine its accuracy.

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**Q. Can you give an example of the data quality problems you encountered?**

A. Yes. A good example is the records the Company provided of what it terms back-billing in the Homer Glen area; that is, customers who received bills that appear to contain usage related to prior billing periods. As I discuss later, the Company states that these back bills arose because of faulty meter reading devices that were hard-wired into the customers' meters by the prior owner of the utility. The Company originally provided a list of 474 customers who it says received back bills. The response (HG interrogatory 1.16) provides a list of the affected customers and a scanned copy of the printout of each customer's bill.

We manually entered this information into a spreadsheet and database so that it could be analyzed. We identified several customers that did not appear to have the characteristics of being back billed. For example, we identified 8 customers whose prior bill was zero, which could indicate a new customer rather than a customer with a malfunctioning meter reading device. We also identified 161 bills where the bill identified as the back bill was actually lower than the bill in the previous month. Similarly, almost 50% of the bills identified as back bills had total consumption of 10,000 gallons or less. This would be unusual if there had been a malfunctioning device for more than a few weeks, since the typical customer would use between 5,000 and 7,000 gallons per month.

Weeks after IAWC first identified these 474 accounts as being back billed, the Company modified its response and stated that these accounts were only identified as possibly having received back bills. I am attaching as AG/HG Exhibit 1.1 the Company's original response to HG 1.16 (provided around May 1), its revised response –

which was provided on June 12, 2006 – and its responses to AG 3.3 and AG 3.6 (also provided on June 12).

This problem was made even worse when the Company provided data concerning the bills received by these 474 customers in the 12 months before and after the so-called back billing month. In light of the problem we encountered with the Company's initial response, we specifically requested the information in an electronic database or spreadsheet file. What we received, frankly, was a mess. The file had duplicate information for some of the 474 customers and completely omitted others. It also had information that made no sense – billing dates that are in the future, meter change dates that do not match the information provided on the bills in HG 1.16, back bills being issued before the meter change date, and so on. I have no way of knowing if the errors are in the Company's computer system or if the spreadsheet we were provided was entered by hand rather than being output directly from the computer system. In any event, there are so many errors in the data that I simply cannot rely on it to draw any firm conclusions. Basically, the more information we receive, the more unreliable the data appear to be.

**Q. Do these 474 customers represent all of the customers who experienced back billing problems?**

A. No, I believe that the customers selected by the Company are limited to those in Homer Glen and some surrounding communities. I do note, however, that some of the mailing addresses (which match the address of the premises where service is provided) are in Chicago, Orland Park, Bolingbrook, and at least a dozen other communities in addition to

Homer Glen. I will discuss later why I believe that these 474 customers are merely the tip of the iceberg in terms of customers who receive back bills after a meter change.

**Q. Are your data quality concerns limited to customer bill records?**

A. No, they are not; that was just one example. The same types of problems appear throughout this case. For instance, in AG 1.10 we requested the complaint logs for the past three years. Counsel advises me that section 600.170(c) of the Commission's regulations requires the Company to keep these logs. The logs list more than 8,000 customer complaints, but only 9 of those are from the 474 customer accounts listed in HG 1.16. Yet, elsewhere the Company has stated that it received complaints from 189 Homer Glen customers. We asked for an explanation of this discrepancy (AG 3.21). The Company explained that its complaint logs do not show all complaints it received, only those that were not resolved by a customer service representative. In other words, the complaint data provided likely omits thousands of complaints the Company received, including most of those from Homer Glen customers. A copy of the Company's response to AG 3.21 is attached as AG/HG Exhibit 1.2.

Another rather incredible example is the Company's inability to provide information about customers who received consecutive bills with zero consumption. In AG 3.20 (a copy of which is attached as AG/HG Exhibit 1.3), we requested information about customers who received at least three consecutive bills with zero consumption. The Company refused to provide the information because it would "require thousands of man-hours of work." All of the Company's billing records are computerized and I cannot understand why it would take thousands of hours to query the billing database and obtain the information we requested. Either the Company does not know how to extract data

from its own database or its billing system is so antiquated that it does not maintain the information in any type of useable form. In any event, the Company's inability to extract this type of information from its billing system is very troubling.

**Q. How will you proceed?**

A. Counsel for the People and Homer Glen decided that the issues raised in this case were too important to seek a delay in the schedule, so they have asked me to make recommendations based on the data that are available. I would caution, however, that I have no confidence in the accuracy of any of the data provided by the Company. Because of that, my primary recommendation is that the Company should be required, at shareholder expense, to retain an independent auditor to conduct a full-scale audit and review of the Company's billing, metering, meter-reading, and customer service operations. This audit should include not only typical management and performance issues (such as procedures to monitor and minimize the number of consecutive zero-consumption and estimated bills), but also a full audit to determine the accuracy and integrity of information contained in the billing and customer service records.

I also recommend that the Commission share its findings with its counterparts in other jurisdictions where subsidiaries of American Water Works operate. It appears that the same billing and customer service system is used throughout the American Water Works system. The system uses common call centers to serve all states and it appears that the same billing system and computer programs are used throughout the American Water Works system. If these problems exist in Illinois, it is likely that there may be problems in other jurisdictions as well.

I cannot emphasize enough the importance of ensuring the accuracy and integrity of this information. Billing data is a fundamental component of every rate case (including purchased water adjustment cases). Those records also are (or should be) directly related to the Company's accounting records which are used not only for regulatory purposes, but also for taxes, investor reporting, and other critically important functions. Based on what I have seen in this case, I seriously question whether IAWC – and by implication the entire American Water Works family of companies – has accurate information about customer consumption, billing, metering, and revenues. Unless and until the integrity and accuracy of this information can be assured, through an independent audit, I do not believe that the Commission can rely on this information for any purpose.

In the remainder of my testimony, I will use some of the Company's data to highlight problems that I have identified. I would again caution, however, that the data I am using were provided by the Company and may not be accurate.

**Q. What do you conclude about the quality of IAWC's data?**

A. I conclude that the Company has very serious data quality issues with its customer service, billing, and metering records. The Company was not able to respond to reasonable requests for information – the type of information that should be readily available from a competent billing and customer service system. Further, when information was provided, it was often riddled with inaccuracies and inconsistencies that made the data not only unusable, but also cast doubt on the veracity of all information provided. I conclude, therefore, that the Commission should order the Company (at shareholders' expense) to retain an outside firm to conduct a full-scale audit of the

Company's billing, metering, and customer service records. I also recommend that the Commission share its findings with its counterparts in other jurisdictions where subsidiaries of American Water Works operate.

## 5. Back Billing

**Q. You mentioned that one of the causes of high bills was back billing. What is back billing?**

A. Back billing, also called make up bills, refers to charging customers for usage during a prior period when there was a billing or metering error, malfunction, or estimate. In Illinois, counsel advises that utilities are allowed to issue make up bills for up to 12 months for residential customers and up to 24 months for non-residential customers.

**Q. When IAWC issues a make up bill, is there anything on the bill that identifies the consumption as related to a prior period?**

A. No, there is not. IAWC provided copies of hundreds of bills that supposedly were back bills. None of them contained anything that identified the consumption as relating to a previous period, or that otherwise informed the customer that the bill was correcting previous errors or malfunctions.

**Q. Is that a reasonable utility billing practice?**

A. No, it is not. The bill that IAWC sends states that the consumption is "Present-Actual" usage. I am providing two of the back bills as AG/HG Exhibit 1.4. These bills are two of the back bills provided by the Company in response to HG 1.16, but they remove the customer-identifying information. I am providing two samples because the Company provided two types of bills – those that look like the actual bill received by the customer

(with the Company logo) and those that are in the form of “duplicate” bills that the Company would send if a customer lost a bill or never received it. The language and format of all of the other back bills provided by the Company are identical to one of these two.

If the “Present-Actual” consumption amount includes back billing – which it apparently did for at least several hundred customers – then the bills did not correctly describe what the customer was being charged. In addition to issuing inaccurate or misleading bills, the Company also is essentially asking customers to call them and complain – something that no utility or other company should ever do. Calls to a call center are expensive. Depending on the utility, I have seen estimates showing the cost of calls to a call center ranges from \$3.00 to \$5.00 or more per call. The Company should try to avoid doing anything that essentially forces customers to call the call center to get accurate information.

**Q. How serious was the back billing that occurred in the Chicago Metro area?**

A. According to the Company’s data, more than 400 customers received back bills between August 2003 and September 2005. As I mentioned earlier, I question whether all of these customers actually received back bills. I also do not know if the Company’s list might have omitted any customers who also received back bills. In any event, some of the bills received were extremely large. On AG/HG Exhibit 1.5, I show the back bills that were at least three times the amount of the previous month’s bill. As that exhibit shows, there were more than 40 customers who received bills of this extraordinary magnitude – with several of the bills being more than 10 times higher than the previous bill.



340 **Q. Why do some accounts appear twice on AG/HG Exhibit 1.5?**

341 A. I do not know. This is another one of the integrity or quality issues with the Company's  
342 data. In this list, there are four customer accounts that appear twice, with bill dates  
343 almost exactly one year apart. I do not know which date is accurate or why the customer  
344 appears twice in the Company's list.

345 **Q. Why did the Company issue these back bills?**

346 A. The Company states that these customers had an odometer-style meter reading device  
347 that was wired into the water meter. These devices were placed on the outside of the  
348 customer's premises when the water meter was inside, and the odometer type of readout  
349 was supposed to show the same reading as the meter. The Company states that all of its  
350 customers with these devices were in the Chicago Suburban area that used to be owned  
351 by Citizens Utilities. When IAWC acquired the Citizens service area in Illinois, it  
352 inherited these odometer-style reading devices. Unfortunately, over time these devices  
353 stopped working properly and the outside read did not match the actual consumption as  
354 shown on the meter. It is this mismatch between the meter and the outside device that  
355 resulted in the need for back billing.

356 **Q. Do we know the full scope of the back billing problem?**

357 A. No, we do not. The Company has said that the outside reading devices (the "odometer"  
358 style devices) that malfunctioned were in place throughout its Chicago Metro service  
359 area. Homer Glen is within this area, but the area covers many communities in addition  
360 to Homer Glen. However, there is no reason to believe that meters or meter-reading  
361 devices can only malfunction in the Chicago Metro area, or that the specific device that  
362 was not working in that area is the only meter-reading device that can malfunction.

Indeed, from just the 474 customers about whom we have detailed information, there were several failures of the radio-read device that was installed to replace the “odometer” style device.

**Q. Did you ask for information about the statewide scope of the back billing problem?**

A. Yes, we did, and the Company finally provided it on June 28, 2006, as this testimony was being prepared (the question was asked on May 4). In AG 2.7 we asked for information about all customers in Illinois who received a bill that was at least 50% higher than the bill in the prior month or the bill in the same month of the previous year. I have not had an opportunity to fully analyze these data, but I did have the opportunity to do a preliminary analysis on the data for the first five months of 2006. From the file provided, I selected those accounts that had a different meter than they did in 2005 and that had exactly one bill that was at least 50% higher in 2006 than the same month in 2005. The data for just the first five months of 2006 show more than 7,900 customer accounts in Illinois where this occurred. From the information provided by the Company, I do not know if all of these bills represent back billing, but certainly a large number of them would be.

**Q. In the limited amount of time you have had to analyze the data from AG 2.7, can you point to any examples that indicate the scope of the potential back billing problem statewide?**

A. Yes, I can, but only in a very summary way. Many of the bills that were issued were for several times more consumption than the same month in the previous year – 4, 5, or even 10 times the consumption as the same month in the previous year. Variations of this

magnitude are likely to indicate problems with metering, meter reading, or billing, rather than normal variations in consumption.

**Q. Is it appropriate for a utility to issue make up bills when a meter reading device malfunctions?**

A. Yes, it is. Part of the regulatory process is that customers must pay for service at the tariffed rates. Utilities are not permitted to give free or reduced price service, unless it is specifically authorized as part of its tariffs (or to settle disputes, of course). With back billing, there must be some time limit on how far back the utility can go, so the utility has an incentive to properly maintain its metering and meter reading equipment, and to properly train and supervise its personnel. Further, the correction should be identified on the customer's bill as being an unusual charge, and the customer should be allowed to pay back the amount resulting from the utility's error or equipment malfunction over a reasonable period of time. I understand that Illinois law allows utilities to go back up to one year for residential accounts and up to two years for other accounts. It also gives customers the ability, in many circumstances, to pay back billed amounts over roughly the same period of time included in the back bill during which the malfunction went undetected by the utility. For example, if a utility back bills for three months of consumption, then the customer should have three months to pay the utility with no interest charges or penalties.

**Q. Did IAWC follow proper procedures when it back billed customers?**

A. No, it did not. As I discussed earlier, IAWC did not identify the consumption or charges as relating to a prior period. IAWC also did not provide customers with a reasonable period of time to pay the back billed amount, unless the customer did not pay the full

amount of the bill and specifically requested a payment plan. Finally, IAWC did not have procedures in place to ensure that its back billing was limited to 12 or 24 months, as required by Illinois law. It appears from the amount of the back billing that at least 10 accounts were back billed for consumption in excess of the legal requirement. These are the accounts at the top of AG/HG Exhibit 1.5 with bill increases of at least 1000% (10 times the previous month's bill). According to the Company's General Response to AG Set 3, only one of those accounts (474177) is non-residential and that one received a bill that was 36 times the previous month's bill.

**Q. How many of the back billed accounts received payment plans?**

A. According to the Company, out of the 474 accounts it has identified as possibly being back billed, only 15 received any type of payment plan.

**Q. Did the Company explain why?**

A. Yes, it did. According to the Company's interpretation of Illinois law, it is only required to provide a payment plan for a back billed customer if the customer does not pay the bill on time and the bill is more than 50% higher than the customer's typical bill.

**Q. In the few instances where the Company offered a payment plan, did the payment plans give customers a reasonable period of time in which to pay the back billed amount?**

A. No, not in every instance. AG/HG Exhibit 1.6 provides a summary of each of the 15 payment plans offered by the Company. It can be seen from the exhibit that there were at least two instances where the length of the payment plan did not give the customer an

429 opportunity to pay the back billed amount over the same period of time as the metering  
430 malfunction occurred.

431 **Q. Please describe the two instances you highlighted on AG/HG Exhibit 1.6.**

432 A. The two accounts I highlighted on AG/HG Exhibit 1.6 are for accounts where it appears  
433 that there were long-standing metering or meter reading malfunctions.

434 Account 22413 received a bill in January 2005 for 39,000 gallons of consumption,  
435 resulting in a total bill of \$314.90 for the month. A copy of the bill, without the  
436 customer's name and address, is provided as AG/HG Exhibit 1.7. In contrast, over the 12  
437 months before this bill was issued, the customer received 10 bills showing zero  
438 consumption and 2 bills that each showed consumption of 1,000 gallons. It seems clear,  
439 therefore, that the back bill covered a period of at least 12 months, yet the customer was  
440 given a payment plan of only 4 months.

441 Account 528483 received a bill in February 2005 for 179,000 gallons of  
442 consumption, resulting in a total bill of \$564.75. A copy of the bill, without the  
443 customer's name and address, is provided as AG/HG Exhibit 1.8. Over the previous 12  
444 months, the customer received 11 bills with zero consumption and one estimated bill for  
445 7,000 gallons. Thus, the back bill covered a period of at least 12 months, but the  
446 customer was given a payment plan of only 2 months.

447 **Q. As far as you can tell, did the Company inform back billed customers of their**  
448 **rights?**

449 A. No, it does not appear that the Company informed customers of their rights. In fact, just  
450 the opposite is true. From the customer service records I reviewed, it appears that the

Company told customers they were required to pay the entire bill on time. Initially, customers also were told that the unusual consumption may be the result of excessive consumption or customer leaks. For example, account 49551 is a Homer Glen area residential customer whose consumption always ranged between 6,000 and 15,000 gallons per month, according to the Company's records. Yet in August 2005 – just after a meter change – the customer received a bill for 73,000 gallons. The customer waited until he received a couple of additional bills, which showed consumption back in the normal range of between 7,000 and 12,000 gallons. Then in late November, the customer contacted the Company to seek a correction in the August bill for 73,000 gallons. The Company sent a letter (attached as AG/HG Exhibit 1.9) that makes this the customer's problem and suggests that there may be a leak. Of course, a leak would not explain why usage returned to the normal level from September through November, but the Company apparently did little or no investigation of the real cause of the billing problem.

**Q. According to the Company's records, how many of the back billed customers had bills 50% higher than normal?**

A. According to the Company's revised General Response to AG Set 3, at least 148 of the 474 accounts had usage that was at least 50% higher than a typical bill. I would note, though, that the original response to that question showed 156 accounts where the bill was at least 50% higher than typical bill. In addition, two of the customer accounts do not have this field filled in on the Company's revised response, so the actual number may be higher.

472 **Q. Has the Company done anything to respond to these concerns?**

473 A. Yes, the Company stated that it stopped back billing customers in Homer Glen with  
474 defective outside reading devices in September 2005. It also said that it reversed all back  
475 billed charges to customers with those devices that it had back billed. It is unclear  
476 whether the Company has applied this same policy in other areas of Illinois, or just within  
477 Homer Glen. Moreover, the Company does not appear to have changed its billing  
478 procedures. Thus, as far as I can tell, the Company has not changed the information that  
479 appears on a back billed customer's bill nor has IAWC adopted procedures to advise  
480 customers of their ability to pay the back billed amount over a reasonable time period. It  
481 also is not clear that the Company has established procedures to identify consecutive  
482 zero-usage or estimated bills, or to limit any back billing to 12 or 24 months, as required  
483 in Illinois.

484 **Q. Does the Company's voluntary action appear to comply with the Commission's**  
485 **regulations on refunds in these circumstances?**

486 A. No, it does not appear that the Company has fully complied with the Commission's  
487 regulations. I am advised by counsel that the relevant regulation is section 280.75,  
488 dealing with refunds. The regulation states that if a customer has paid the bill "and the  
489 billing is later found to be incorrect due to an error ... in measuring the quantity or  
490 volume of service provided" the utility must refund the overcharge "with interest from  
491 the date of overpayment by the customer" at an interest rate established by the  
492 Commission. From the information I have seen, the Company did not credit any  
493 customers with interest on the overpayments.

**Q. From the Company data you have reviewed, does it appear that the Company actually stopped back billing for meter change-outs in September 2005?**

A. No, it appears that the Company continues to issue back bills after meter change-outs. Late on June 23, 2006, the Company finally responded to data request AG 2.2, where we requested information for customers who received three or more consecutive estimated bills. (The data request was made on May 4 and resent on May 10.) That response shows numerous customers whose meters were read manually, or received estimated bills, and then had radio-read meter readings. This would indicate that the meter or meter-reading device was changed from a manual-read meter to a radio-read meter. I have extracted accounts from the Company's data response where the first radio meter reading was at least 50% higher than either prior or subsequent bills, indicating that it was a make-up bill. This pattern persisted after September 2005 and continues into 2006. I have prepared AG/HG Exhibit 1.10, which summarizes those accounts where the meter change occurred after September 2005. Again, I would note that we only received this information while the testimony was being prepared, and there has not been an opportunity to verify the accuracy of the information or conduct any type of follow-up questioning. Nevertheless, after September 2005, there are at least 50 customers who received what appear to be make up bills after meter change outs.

Further, as I discussed above, a database that the Company provided on June 28 (AG 2.7) contains thousands of accounts that have characteristics consistent with back billing that appears to have occurred during the first five months of 2006.



515 **Q. What do you conclude about IAWC's back billing?**

516 A. I conclude that the Company improperly issued make up bills to hundreds of customers in  
517 the Chicago Metro area, and we still do not know the full scope of the problem. The bills  
518 that we have seen were not identified as relating to prior-period usage, did not inform the  
519 customers of their right to a payment plan, and were not limited to the required 12- or 24-  
520 month back billing period. Further, of the few payment plans that were issued, at least  
521 two of them failed to comply with the Commission's requirements. Moreover, when the  
522 Company decided to refund the charges to certain customers, the refunds were not made  
523 with interest, which also appears to violate the Commission's regulations. It also is not  
524 clear how the Company decided who was entitled to a refund and in what amount.

525 **6. Estimated Bills**

526 **Q. In your review of Company billing records, did you develop an opinion about the**  
527 **Company's use of estimated bills?**

528 A. Yes, I am very concerned about what appears to be the Company's reliance on estimated  
529 bills and its apparent failure to track and correct repeated estimated bills. It is sometimes  
530 necessary to prepare an estimated bill, particularly when a meter is manually read and the  
531 meter reader cannot obtain access to the meter. Estimating bills, however, should not be  
532 a routine practice and should not be used as a way to compensate for having an  
533 inadequate number of personnel to promptly read and maintain meters.

534 **Q. Why is it important to limit the number of estimated bills?**

535 A. There are two primary purposes for monthly billing for water service. First, monthly  
536 billing provides the customer with a bill that is more manageable than a bimonthly or

quarterly bill. This can be particularly important for customers on a fixed income where it may be difficult to budget for bills that come only every two or three months. Second, monthly billing provides accurate and timely information to customers about their water consumption. This is important both to encourage conservation and to help customers determine if there is a leak, meter malfunction, or other unexplained use of water.

When bills are estimated, both of these benefits of monthly billing can be jeopardized. The information provided to the customer about his or her consumption is no longer accurate and timely. Further, if bills are not estimated accurately, the resulting make up bill can impose a severe burden on customers on a tight budget – undercutting one of the major advantages of monthly billing.

**Q. From your review of data provided by the Company, how prevalent are estimated bills?**

A. The Company provided monthly data from January 2004 through May 2006 about the number of estimated bills and total bills in Illinois. I summarize these data on AG/HG Exhibit 1.11. Overall, the Company is estimating about 7% of its bills, which would mean that on average each customer would receive an estimated bill every 13 or 14 months. As an overall average, I do not consider this figure to be unreasonable, though it may be a little high given the prevalence of radio-read meters within IAWC's service area.

**Q. Then what is your concern with the Company's use of estimated bills?**

A. There are two concerns. First, in looking at AG/HG Exhibit 1.11, there are months where the number of estimated bills spikes dramatically. In 2004, the spike occurred in

559 February when almost 30% of bills in Illinois were estimated. In 2005 and 2006, the  
560 spikes were in January when almost 16% and 13% of bills, respectively, were estimated.

561 **Q. Do you know why the number of estimated bills spiked in these months?**

562 A. No, I do not know for certain why the number of estimated bills was so high in these  
563 months. Some of the cause could be related to weather, but as the Company implements  
564 more radio-read meter reading, the number of estimated bills and the impact of weather  
565 on meter reading should be declining. From the limited data we have, it is unclear  
566 whether that is occurring.

567 **Q. What is your second concern?**

568 A. My second concern deals with the Company's tracking of estimated bills on a customer-  
569 specific basis. The overall number of estimates is one useful piece of information. But it  
570 also is important to examine the action the Company takes to address customers that  
571 receive repeated estimated bills.

572 **Q. Why would a customer receive repeated estimated bills?**

573 A. There are primarily three reasons why a customer could receive repeated estimated bills.  
574 Either the meter reader cannot obtain access to the meter (this is most commonly a  
575 problem with indoor meters that do not have a remote device attached), the Company  
576 does not have enough meter reading personnel, or there is an equipment malfunction (the  
577 meter or meter reading device is not working properly).

**Q. Are there indications in Homer Glen that there were problems with repeated estimated bills?**

A. Yes, there are. In response to HG 1.13, the Company identified more than 300 customers in the Homer Glen area who received three or more consecutive estimated bills since 2003. Several of those customers received six or more consecutive estimated bills, with one receiving 12 – an entire year with no actual meter reading.

In a follow-up question (AG 2.2), the Company provided additional information about 282 of these customers, which I have summarized on AG/HG Exhibit 1.12. That exhibit shows the total number of estimated bills for each of these customers over a roughly five-year period. On average, these customers had more than 20% of their bills estimated, with 83 of them having at least 25% of their bills estimated.

As I mentioned previously, issuing several consecutive estimated bills, or having a continuing pattern of estimating bills, is an indication that something is wrong either with the equipment or with the staffing of the utility.

**Q. In the case of Homer Glen, do you know the reason why so many bills were being estimated?**

A. I am not certain of the cause, but there are some indications that point us in the right direction. According to the Company, the customers in Homer Glen all had outside meter reading devices, so access to the premises should not be a major reason for estimating reads. We also know that many of these outside devices were malfunctioning, which could be a cause for providing estimated reads. However, if that was the cause, the devices and/or the meters themselves should have been replaced quickly. To allow

estimated reads to continue for months on end – and then to hit the customer with a make up bill – is an extremely poor practice that should not be tolerated. The final possible cause is inadequate staffing. There are some indications that this might also be a contributing factor at least in the Homer Glen area, and perhaps statewide. For example, in November 2005, a Homer Glen area customer (#49630) called the Company to complain that she received two consecutive estimated bills, even though her meter had been replaced and was now a radio-read meter. According to the customer, IAWC told her: “There have been many water main breaks in the area. Quite frankly, we just didn’t have anyone available to read the meter.” A copy of the customer’s complaint record, with customer-identifying information deleted, is attached as AG/HG Exhibit 1.13.

**Q. Are there other indications that the Company might not have an adequate number of meter-reading personnel?**

A. Yes, there are. The customer’s complaint record in AG/HG Exhibit 1.13 is consistent with information that we saw in the Company’s meter reading data. After meters were replaced with radio-read meters, the records indicate that there were customers who still periodically receive estimated bills. We asked the Company about several of these instances in AG 2.21. While some of the problems were the result of equipment malfunctions, the Company also said that a radio-read meter route “was not read in late July 2005.” We do not know how many other meter routes had the same thing happen, either in July or another month, but it is inexcusable. This is particularly the case in the summer of 2005, where much of Illinois was in a serious drought and the Company should have been trying to send customers bills that were as accurate and timely as possible.

623 **Q. Does the Commission have regulations concerning the estimating of utility bills?**

624 A. Yes, I am advised by counsel that section 280.80 of the Commission's regulations applies  
625 to this case. As I understand it, that section prohibits utilities from issuing consecutive  
626 estimated bills unless "the procedure used by the utility to calculate estimated bills has  
627 been approved by the Commission." There also are exceptions for a specific billing  
628 period if a customer refuses access to the premises or if "circumstances beyond the  
629 control of the utility make an actual reading of the meter extremely difficult."

630 **Q. Let's take these issues one at a time. To the best of your knowledge, has the**  
631 **Commission approved any procedure that would allow IAWC to issue three or more**  
632 **consecutive estimated bills to customers?**

633 A. No, to the best of my knowledge the Commission has not done so, and should never do  
634 so. As I said before, it is an extremely poor practice to allow customers to receive  
635 numerous consecutive estimated bills.

636 **Q. To the best of your knowledge, have there been hundreds of Homer Glen area**  
637 **customers who have refused access to their premises for meter reading or who have**  
638 **refused to comply with requests for telephone or post card readings?**

639 A. No. The meters in the Homer Glen area had outside reading devices on them so that the  
640 Company did not have to obtain access to the customer's home or business. The meters  
641 could be read from outside the building. If the Company could not obtain readings from  
642 those meters, it either was not attempting to read them or the equipment was  
643 malfunctioning.

644 **Q. To the best of your knowledge, have hundreds of Homer Glen area customers**  
645 **“otherwise made an actual reading of the meter unnecessarily difficult?”**

646 A. No, as I said, I have not seen indications that hundreds of customers are impeding the  
647 Company’s attempts to provide accurate meter reading.

648 **Q. To the best of your knowledge, have there been “circumstances beyond the control**  
649 **of the utility” that make “an actual reading of the meter extremely difficult?”**

650 A. No. Limited manpower or malfunctioning equipment are not circumstances beyond the  
651 utility’s control. While bad weather for part of a month may result in some meters not  
652 being read that month, weather could not explain customers receiving three or more  
653 consecutive estimated bills.

654 **Q. What do you conclude about IAWC’s use of estimated bills?**

655 A. I conclude that IAWC has been issuing improper estimated bills to hundreds, if not  
656 thousands, of customers in Illinois. The Company has issued three or more consecutive  
657 estimated bills to hundreds of Chicago Metro customers. There have been instances  
658 where the Company failed to read meters – even radio-read meters – because of a  
659 shortage of personnel. It also does not appear that the Company is properly tracking and  
660 attempting to correct consecutive estimated meter reads, so that the circumstance leading  
661 to the estimate remains uncorrected for many months.

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## 7. Consecutive Zero Bills

662  
663 **Q. Earlier when you talked about customers who received payment plans, you**  
664 **discussed two customers who each received numerous bills with zero consumption.**

665 **Why would zero-consumption bills be issued to a customer?**

666 A. There are very limited circumstances under which a customer would really use no water  
667 for an entire month. If the premises are vacant there may be no water consumption  
668 (although certain appliances, heating systems, and cooling equipment may consume  
669 water even if no one is occupying the building). If the premises are occupied, however, it  
670 is extremely unlikely that a zero-consumption bill would be an accurate bill. It is far  
671 more likely that there is a problem somewhere – either with the meter, meter reading  
672 device, or meter reading personnel.

673 **Q. Does IAWC have reasonable procedures to investigate zero consumption bills?**

674 A. No, it does not. It appears that IAWC does not have any procedures to either flag or  
675 investigate zero consumption bills.

676 **Q. How serious of a problem are zero consumption bills for IAWC?**

677 A. In response to AG 3.19, the Company provided a 280-page printout of all customer  
678 accounts showing three or more consecutive zero readings. From the summary at the end  
679 of that file, it appears that the information provided looked only at the month of April  
680 2006. As of that month, there were more than 4,200 accounts statewide that had at least  
681 three consecutive months with zero consumption. On an annual basis, if I understand the  
682 Company's printout correctly, there were on the order of 20,000 accounts that had three



683 or more consecutive months of zero consumption (12 months ending April 2005 shows  
684 21,117 accounts; 12 months ending April 2006 shows 19,657 accounts).

685 **Q. Do all of those accounts indicate some type of metering or billing problem?**

686 A. No, certainly many of them are legitimate zero consumption bills – vacant buildings or  
687 apartment units, for example. The concern I have is that the Company does not appear to  
688 have any procedures to investigate consecutive zero consumption reads, so it is missing  
689 problems related to malfunctioning equipment or improper meter reading practices. I  
690 highlighted two such customers previously – occupied buildings with real consumption  
691 that was missed because of malfunctioning equipment. Then the customer received a  
692 huge make up bill, after a year or more of zero-consumption reads. That is not a  
693 reasonable utility practice and it is harmful to customers.

694 **Q. How are customers harmed? Wouldn't customers be happy to get a bill for zero**  
695 **consumption?**

696 A. The harm to customers is two-fold. First, it is likely that the Company will eventually  
697 discover the problem. When that happens, the customer will receive a large make up bill,  
698 as we have seen. So it is unlikely that the customer will “get away with” not paying for  
699 service.

700 Second, through the ratemaking process all other customers end up paying for the  
701 erroneous zero-consumption customer. In the Chicago Metro area (of which Homer Glen  
702 is a part), all of IAWC's water is purchased from another entity. Through annual  
703 purchased water cases, the cost of buying water is divided by all metered consumption to  
704 develop the cost per 1000 gallons that customers pay for purchased water. If there is

consumption that is not being properly metered, then all other customers' rates will increase in order to cover the cost of that water. The same thing also happens in a base rate case: the revenue requirement is spread over all metered consumption. If the metering is not accurate and understates metered consumption, higher base rates would result than would otherwise be the case.

In other words, customers are not really getting free service, because the Company will usually catch the error at some point. Further, the metering problems result in all other customers paying higher rates than they would pay otherwise.

**Q. You seem to place all the fault on the Company. Doesn't the customer have a responsibility to contact the Company if the customer receives a zero-consumption bill?**

**A.** No, I do not think the responsibility lies with the customer. I am not offering a legal opinion about whether the customer has any kind of obligation to report an inaccurate bill. In my experience in other jurisdictions, I do not believe that such an obligation exists or should exist. Further, and more importantly, there is a lot of information on the Company's bill and it is not very easy to find and understand what is being presented. Most customers will focus on the total amount of the bill. And the total amount of the bill is not zero – every customer will be billed a customer (or meter) charge. Further, many IAWC customers in the Chicago Metro area also have sewer charges and fire protection charges on their bill, which tend to be flat rates (that is, the charge does not vary with consumption). So it is very possible for a zero-consumption bill to still be \$50 or \$60 per month. With a bill of that magnitude, it is not likely that a customer would discover the metering error unless he studies the bill very carefully. So, no, I would not

put any of the responsibility on customers to contact the Company when a zero-consumption bill is issued in error.

**Q. In your opinion, is it reasonable and consistent with standard industry practice to simply assume that consecutive zero-consumption bills are accurate?**

A. No, it is not. In my opinion, two or three consecutive zero-consumption meter readings should be investigated by contacting the customer of record to determine if the premises are occupied.

**Q. Do you have any information that would indicate the scope of the problem at IAWC?**

A. As I mentioned, for the past two years there have been about 20,000 accounts annually that received at least three consecutive zero-consumption bills. I do not have information on all of those accounts. But we do know what happened with the 474 Chicago Metro area customers that the Company identified as receiving make up bills. The Company's data for these 474 customers shows that in the 12 months prior to each customer's meter change, a total of 228 bills were issued for zero consumption.

Moreover, for some customers, tracking of zero-consumption bills would have highlighted the serious equipment problem and probably avoided make up bills of the magnitude issued by the Company. For example, 7 of the customers had zero-consumption bills issued in all 12 months prior to their meter change. Another 6 customers had between 6 and 11 zero-consumption bills issued 12 months prior to the meter change, and an additional 9 customers had 3 or 4 zero-consumption bills. In other words, there were 22 customers who had significant signs of having malfunctioning

meter reading equipment well before the meter was actually changed. If the Company had any systems or procedures in place to investigate zero-consumption bills, some of these customers could have been spared the problem of receiving huge make up bills.

**Q. What do you conclude about zero consumption bills?**

A. I conclude that IAWC is not taking reasonable and prudent actions to track and investigate customers who receive bills that show zero consumption. Such bills can be a sign of malfunctioning equipment or meter reading employees who are not performing their job properly. Investigating such bills early can help to avoid the kinds of problems that the Company experienced in Homer Glen, or at least mitigate their impact.

## **8. Other Billing Problems**

**Q. Did you discover any other concerns with the Company's bills and billing procedures?**

A. Yes, my investigation revealed two other problems with IAWC's bills and billing procedures. First, when the Company over-estimates a customer's consumption, the resulting bill is very confusing. The bill shows negative consumption, but a positive charge for service. An example of this is attached as AG/HG Exhibit 1.14. We inquired into how the Company calculates the bill and it appears that the calculation is accurate, but the bill itself is very confusing (see IAWC's response to AG 2.6, attached as AG/HG Exhibit 1.15). In fact, I think it would be all but impossible for a customer to understand what the bill actually means. In part this is because the line "Overestimate Water" does not show how it is calculated. In AG/HG Exhibit 1.14, that line actually represents the reversal of charges for 8,000 gallons of water, but there is no way of knowing that from

the bill itself. Thus, the customer is being credited with 8,000 gallons, and is then being charged (on the lines for Use and Supply Charge) for 4,000 gallons of water. So, as I said, the total amount of the bill is accurate, but it is very confusing to the customer.

**Q. Does the credit for a previously over-estimated bill fully comply with the Commission's regulations?**

A. No, I do not think it does. I discussed earlier section 280.75 of the regulations, which requires, as I read it, a utility to refund any overcharges with interest. From the information I have seen, when the Company over-estimates a customer's consumption, it does not credit the customer with interest on the overcharge. This appears to violate the requirements of section 280.75.

**Q. What is your second concern with IAWC's bills and billing procedures?**

A. My second concern relates to the information on the bill for purchased water charges. I am advised by counsel that section 600.160 of the Commission's regulations sets forth various requirements for bills rendered on the basis of meter readings. Importantly for purposes of this issue, the regulation states that customers' bills must show the "principal rates" that apply, or the utility must provide an annual statement of such rates.

From my review of the Company's bills, they do not appear to comply with this requirement. The bills do not show the rates on which the supply charge (a charge for purchased water) is based. Thus, it is not possible for a customer to use the consumption shown on the bill and determine whether the supply charge is accurate. We asked the Company about this (IAWC responses to AG 1.8 and AG 2.12, which are attached as AG/HG Exhibit 1.16) and, frankly, I do not understand whether it is claiming that

purchased water is not a “principal rate” or if it is suggesting that the bill somehow shows the rate. In my opinion, the purchased water (supply) charge is a “principal rate” that should be shown on customers’ bills. In some of IAWC’s districts, purchased water costs are actually higher than the base rate consumption charge. For example, in the bill that appears in AG/HG Exhibit 1.14, the customer (or meter) charge for water is \$9.25, the consumption charge is \$14.05, and the purchased water (or supply) charge is \$15.48. As I read the Commission’s regulation, IAWC is required to show how this charge is calculated and it does not do so. This is yet another instance where the information on the bills that customers receive is confusing and does not appear to comply with the Commission’s regulations.

**Q. What do you conclude about IAWC’s bills and billing procedures?**

A. I conclude that IAWC’s bills are confusing and do not appear to comply with the Commission’s billing regulations. First, IAWC should modify the way in which it shows “negative” consumption (or previous over-estimates) on its bills. Second, IAWC should be crediting customers with interest when it over-estimates consumption. Third, the Company should show the calculation of purchased water (or supply) charges on its bills. Finally, as I discussed above, the Company’s bills should clearly identify when a bill is a make up bill, and the consumption and charges attributed to prior months should be specifically identified.

## 9. Fire Hydrants

813

814 **Q. Are you familiar with the allegations in the People's complaint concerning fire**  
815 **hydrants?**

816 A. Yes, I have reviewed that portion of the complaint.

817 **Q. What is the basis for those allegations?**

818 A. The allegations are based on correspondence that was provided to the Office of Attorney  
819 General by several municipalities and fire districts, including the Village of Lisle, the  
820 Lisle Woodridge Fire District, Prospect Heights Fire Protection District, Urbana Fire  
821 Rescue Services, and the City of Champaign. Copies of that correspondence are  
822 provided in AG/HG Exhibit 1.17.

823 **Q. What are these municipalities' concerns with IAWC's fire hydrants?**

824 A. These communities in different parts of the state all raise similar issues. They are very  
825 concerned with the inadequate level of fire flows that are available in many of the fire  
826 hydrants in their communities and with the poor operational condition of many fire  
827 hydrants. This has created serious concerns in these communities and has caused  
828 additional expense for the fire districts.

829 Moreover, I would add that the concerns raised by these communities are  
830 extremely serious. Public fire protection is one of the most important functions of a  
831 public water supply system. Providing adequate fire protection is not simply a matter of  
832 sticking hydrants in the ground. The hydrants must be operated, tested, and maintained;  
833 and the underlying infrastructure (mains, storage, pumping, valves) also must be  
834 operated, tested, and maintained to ensure that everything will work during a fire. Fire

flows place a great deal of stress on a water system, and the system must be designed and maintained to handle those flows without causing damage or other operational problems. In short, the maintenance and testing of the ability to provide fire flows when and where needed is a critically important health and safety function of a water utility. It is not an understatement to say that lives are in danger if the fire protection infrastructure is not properly maintained.

**Q. Have you conducted a full investigation of IAWC to see how widespread these concerns might be?**

A. No, I am not an engineer and I do not have the capability to conduct that type of investigation. Based on the correspondence from these communities, however, there appear to be very serious concerns with the operation, maintenance, and testing of IAWC's fire hydrants and related facilities. These concerns are serious enough that I am recommending that the Commission oversee or conduct a full investigation of IAWC's hydrant testing and maintenance programs throughout Illinois.

**Q. What would be the goals of that investigation?**

A. The investigation should determine whether IAWC is complying with industry standards, as developed by the American Water Works Association, for the periodic testing, maintenance, and identification of fire hydrants. By identification, I mean that any hydrants that are not working or that provide substandard fire flows should be clearly marked so that fire fighters know that they cannot rely on that hydrant in an emergency. In areas where fire flows are inadequate, or where hydrants are not working, the Company should be required to develop an action plan to remedy the problems. In addition, the Commission should consider whether the Company should be allowed to



858 continue charging for public fire service in those areas where the hydrants do not provide  
859 adequate fire flows.

860 **10. Conclusion**

861 **Q. Do you have anything further to add?**

862 A. No, not at this time. As this testimony is being prepared, there is still information that we  
863 have not received from the Company, as well as voluminous information that was  
864 received at the last minute. I have not had an opportunity to review all of that  
865 information or to follow up with the Company to determine whether the data are reliable.  
866 From the information I have been provided, I have no doubt that there are serious  
867 problems with data integrity or accuracy (or, at a minimum, with the ability to retrieve  
868 and understand relevant data), metering and meter reading procedures, billing and related  
869 procedures, and customer service. I also have identified several apparent violations of  
870 the Commission's regulations. I would emphasize, however, that my investigation falls  
871 short of being a full-scale audit of the Company's billing, metering, and customer service  
872 operations. I believe that such an audit is required in order for the Commission to have  
873 assurance that rate-setting (such as the on-going purchased water case) and reporting are  
874 accurate and in compliance with Commission regulations.

875 **Q. Does this conclude your direct testimony?**

876 A. Yes, it does.